

# WOODWORKER'S WJOURNAL

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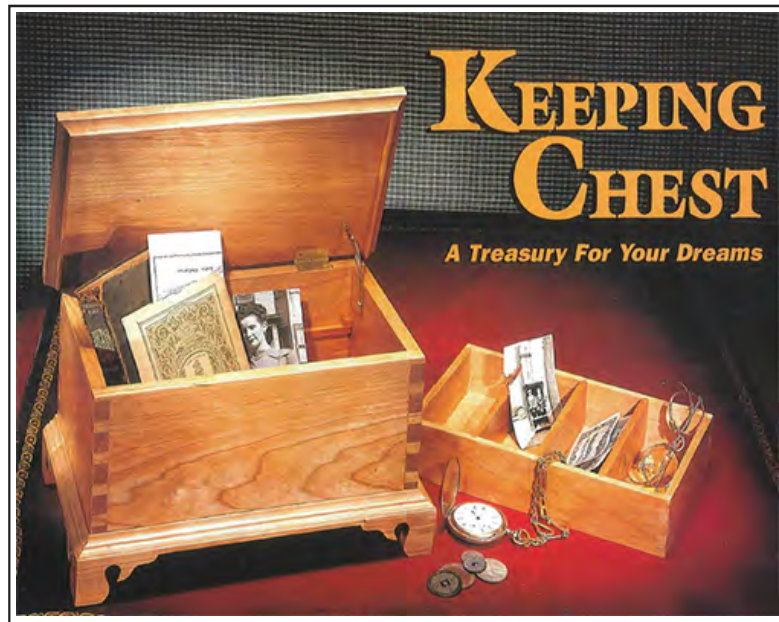
## Classic Plan

In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

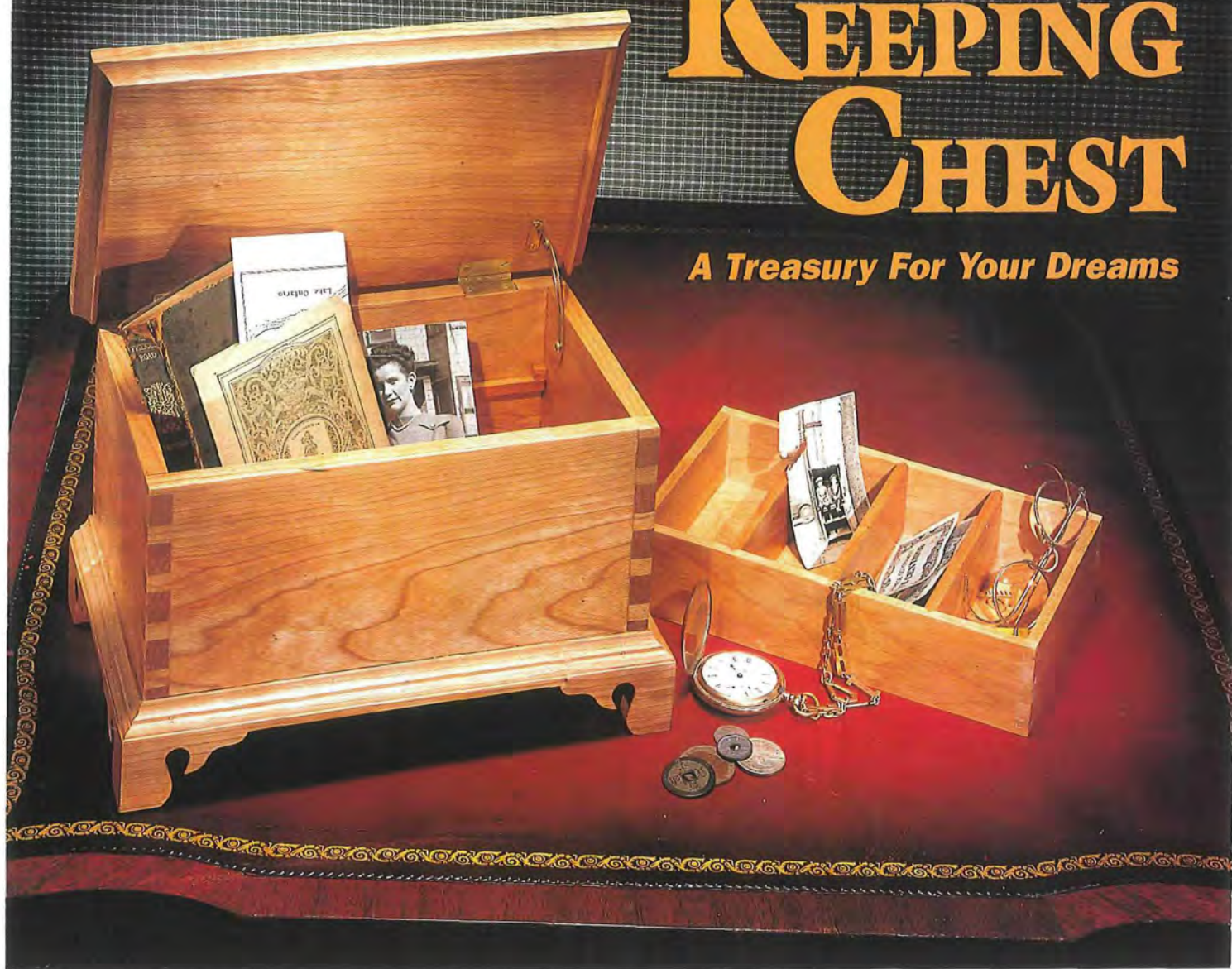
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## Keeping Chest



# KEEPING CHEST

*A Treasury For Your Dreams*



*The American colonists kept their correspondence, their financial records, even their legal documents in variously dimensioned cases of this loosely Chippendale style. (Would that we could still keep all our affairs in such trim little compartments!)*

*A mini-warehouse might suffice for the average citizen's paperwork these days. But just about everyone still has need of a small, portable chest, either for organizing cross-stitch materials or collectors' supplies or just hoarding all those exotic coins your dad brought back from overseas.*

*In his design, Bob Dillon of Hackensack, Minnesota, specified hand-cut dovetails that feature distinctively wide tails and narrow pins.*

## Dovetail and Assemble the Basic Box

**Step 1.** Select and prepare stock for the lid (A) and bottom (B). (We started with two  $\frac{3}{4} \times 7\frac{3}{4} \times 11\frac{1}{2}$ " cherry blanks. To minimize warpage, we ripped each into three pieces, then edge-joined the pieces to form two laminated panels.)

**Step 2.** Select stock for the front and back (C) and sides (D), then plane this stock, along with the lid and bottom laminations, to  $\frac{1}{2}$ " finished thickness. Next, rip and cross-cut the front, back, and sides to the dimensions listed in the Bill of Materials at right.

**Step 3.** Lay out and cut "through" tails in the ends of the sides and mating pins in the ends of the front and back. (Even though we machine-cut our joints, we still scribed shoulder lines with a marking gauge to enhance the appearance of our chest.) If you prefer to rout the pins and tails, see the template shown in figure 1 for the dimensions we get using the jig.) Be sure to position the jig template to create sufficiently wide partial pins (at the edges) to ensure that they won't be flimsy or unsightly. If you prefer to hand-cut these joints, lay out the pins and tails as dimensioned in figure 2.

**Step 4.** Fit your tablesaw with a  $\frac{1}{4}$ " dado head, and cut a  $\frac{1}{4}$ "-deep groove into the inside face  $\frac{1}{4}$ " from the bottom edge of the front, back,

BILL OF MATERIALS

PART	T	W	L	MAT.	QTY.
LID AND BOX					
A Lid*	$\frac{1}{2}$ "	$6\frac{13}{16}$ "	$10\frac{13}{16}$ "	C	1
B Bottom*	$\frac{1}{2}$ "	$6\frac{13}{16}$ "	$10\frac{13}{16}$ "	C	1
C Front/Back	$\frac{1}{2}$ "	$5\frac{1}{4}$ "	$10\frac{3}{4}$ "	C	2
D Sides	$\frac{1}{2}$ "	$5\frac{1}{4}$ "	$6\frac{3}{4}$ "	C	2
E Tray supports	$\frac{1}{4}$ "	$\frac{1}{4}$ "	$9\frac{1}{16}$ "	C	2
F Base front**	$\frac{1}{2}$ "	$2\frac{1}{8}$ "	$11\frac{3}{4}$ "	C	1
G Base sides**	$\frac{1}{2}$ "	$2\frac{1}{8}$ "	$7\frac{1}{4}$ "	C	2
H Base supports	$\frac{1}{2}$ "	$1\frac{1}{2}$ "	$2\frac{1}{4}$ "	C	2
I Front lid molding**	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$12\frac{15}{16}$ "	C	1
J Side moldings**	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$7\frac{9}{16}$ "	C	2
TRAY					
K Sides	$\frac{1}{4}$ "	$2\frac{1}{8}$ "	$5\frac{1}{16}$ "	C	2
L Front/back	$\frac{1}{4}$ "	$2\frac{1}{8}$ "	$9\frac{1}{4}$ "	C	2
M Bottom	$\frac{1}{4}$ "	$5\frac{7}{16}$ "	$9\frac{1}{8}$ "	C	1
N Dividers**	$\frac{1}{4}$ "	$1\frac{5}{8}$ "	$5\frac{1}{16}$ "	C	3

\*Parts glued up from narrow stock.  
\*\*Parts cut to final length during construction.  
Please read all instructions before cutting.

MATERIALS LIST

C—cherry

SUPPLIES

2— $1\frac{1}{4} \times 1\frac{1}{16}$ " brass butt hinges; small right-hand, brass-finish lid support

and sides to accommodate the bottom. Then, finish-sand the inside faces of these parts.

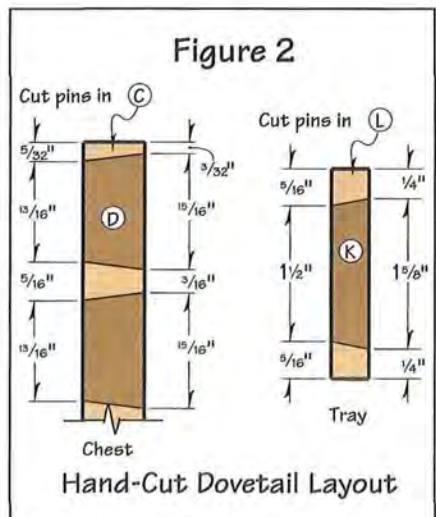
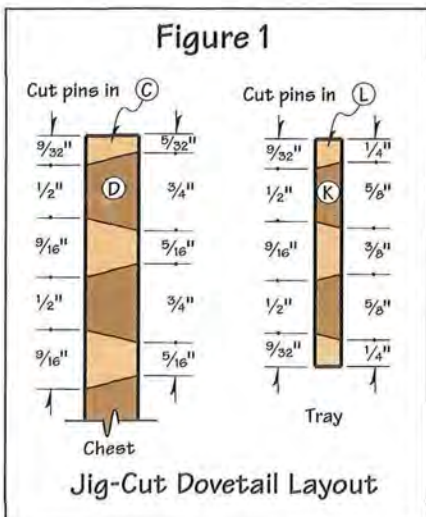
**Step 5.** Using a marking gauge, scribe a line (to position the tray supports) along the inside faces of the front and back  $2\frac{3}{16}$ " from the top edge.

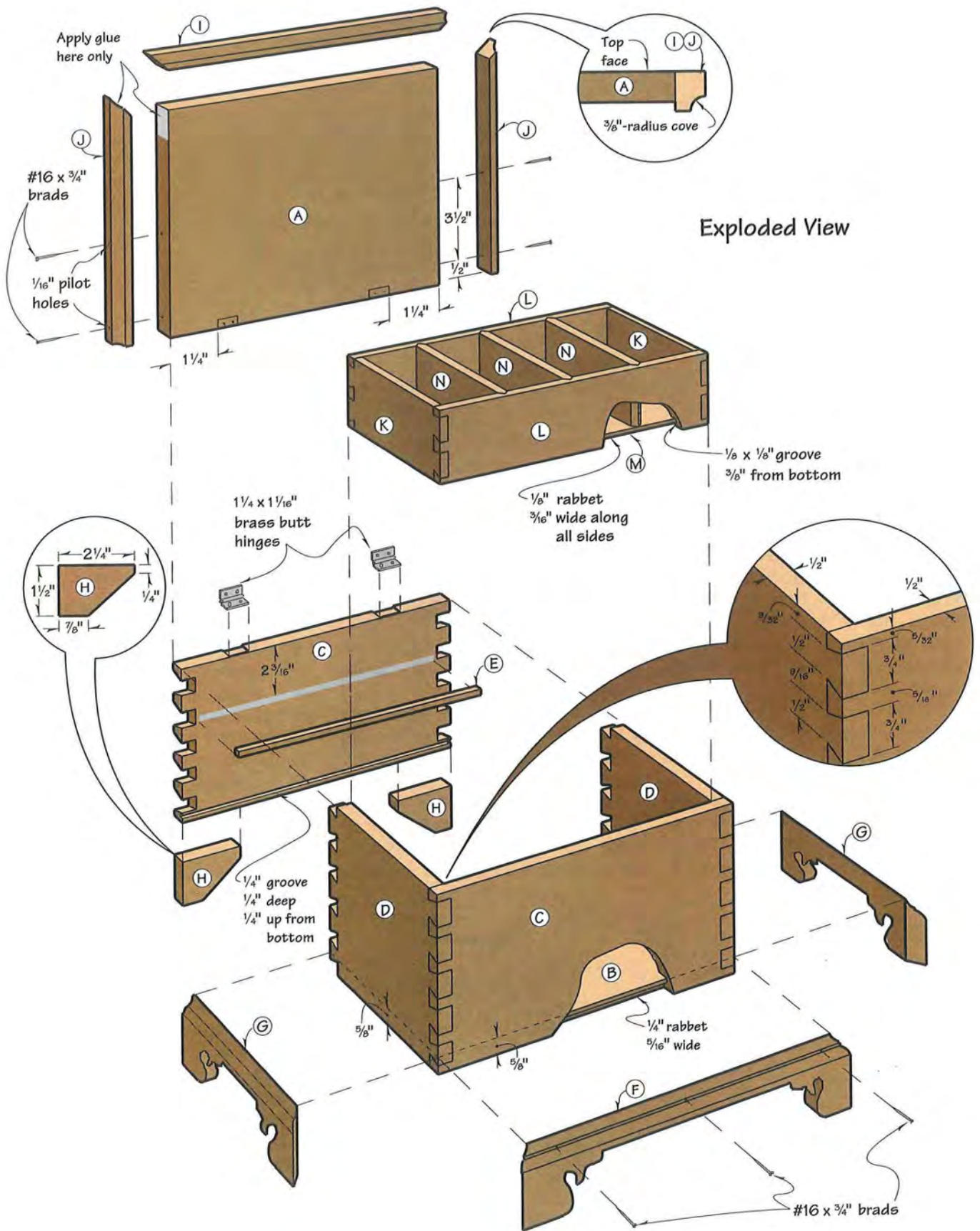
**Step 6.** Cut 28" of  $\frac{1}{4} \times \frac{1}{4}$ " stock for the two tray supports (E) and for other parts that will be added later. Measure the distance from one set of

tail sockets to the other, then subtract  $\frac{1}{8}$ " to establish the length of the supports. Trim the supports to length, then glue, center, and clamp them to the front and back along the bottom side of the scribed lines. Note: Save the cutoffs from the supports to make "mousehole" plugs and corner reinforcements for the base.

**Step 7.** Cut the bottom (B) to finished dimensions. Next, fit your tablesaw with a  $\frac{3}{8}$ " dado head, and attach a wooden auxiliary fence to your rip fence. "Bury" the dado head in the fence to a depth of  $\frac{1}{16}$ ", leaving  $\frac{5}{16}$ " of the head exposed. Then, cut a  $\frac{1}{4}$ "-deep,  $\frac{5}{16}$ "-wide rabbet along the bottom edges of the bottom. Test-fit the resulting tongues in the grooved parts, adjust if necessary, and then finish-sand both faces of the bottom.

**Step 8.** Glue, assemble, and clamp the front, back, sides, and bottom, allowing the bottom to float in its groove without glue. After the glue has dried, cut  $\frac{1}{2}$ "-long pieces of your tray support cutoffs, and glue





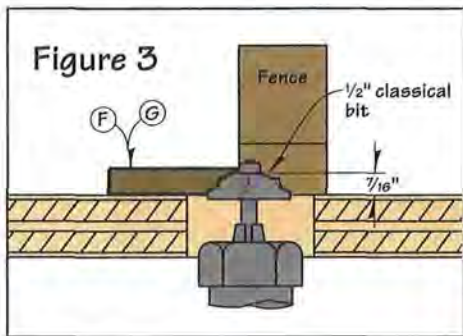
them into the "mouseholes" in the back ends of the sides created by the grooves. Note: The other mouseholes will be concealed by the base. Scrape or plane the joints flush, then finish-sand the box exterior.

## Add a Base To the Box, Then Fit the Lid

**Step 1.** For the base front (F) and sides (G), first cut a  $4\frac{1}{2} \times 18$ " piece of  $\frac{1}{2}$ "-thick stock. Fit your table-mounted router with a  $\frac{1}{2}$ " classical bit, and set it to cut  $\frac{7}{16}$ " deep, as shown in figure 3. Lay the stock facedown, and rout both edges of the piece. Then, rip a pair of  $2\frac{1}{8}$ "-wide strips from the piece to use as base trim.

**Step 2.** From these two shaped strips, fit and miter-cut a base front to length, then miter one end of each base side. Dry-fit the base pieces around the box, then trim the back ends of the sides to length.

**Step 3.** Transfer the full-sized Base pattern to both ends of the three base pieces. Bore  $\frac{1}{2}$ " holes where shown on the pattern, then scrollsaw the rest of the profile to shape. Next, drill  $\frac{1}{16}$ " pilot holes through the parts where shown on the Exploded View drawing.



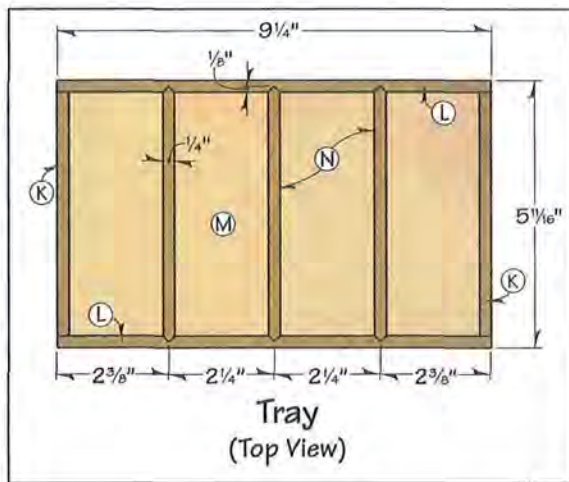
Finish-sand the three pieces, then glue and nail them to the box where dimensioned on the Exploded View drawing, gently clamping the miter joints. (We used a marking gauge to scribe a line for positioning the base.) After the glue has dried, set the nails, fill the holes, then sand the fills flush.

**Step 4.** From  $\frac{1}{2}$ " stock, cut two base supports (H) to shape. (For dimensions, see the detail shown with the Exploded View drawing.) Glue and clamp them to the bottom edge of the back and the back faces of the base sides. After the glue has dried, cut four  $1\frac{1}{16}$ "-long pieces of your remaining  $\frac{1}{4} \times \frac{1}{4}$ " stock, then glue and clamp them in the inside corner of each base joint for reinforcement.

**Step 5.** Measure the outside width and length of the box. Add  $\frac{1}{16}$ " to both dimensions, then cut the lid to this size. Next, position a pair of small brass butt hinges on the bottom face where dimensioned on the Exploded View drawing. (We used  $1\frac{1}{4} \times 1\frac{1}{16}$ " hinges.)

Scribe around the edges with a sharp X-acto knife, chop the mortises, then drill  $\frac{1}{16}$ " pilot holes  $\frac{3}{8}$ " deep for the screws. (The screws furnished with the hinges were too long for our lid, so we substituted  $\#4 \times \frac{3}{8}$ ".)

**Step 6.** To make the lid moldings (I, J), first cut a  $2 \times 18$ " piece of  $\frac{1}{2}$ "-thick stock. Rout a  $\frac{3}{8}$ "-deep cove along both edges of the stock. (We



used a  $\frac{3}{8}$ "-radius cove bit.) Note: Lay the stock facedown—not on its edge—to rout this cove. Rip a  $\frac{3}{4}$ "-wide molding strip from each edge, then cut one 13" and two 8" lengths from these strips.

**Step 7.** Fit and miter-cut the front molding from the 13"-long piece, then glue and clamp it to the front edge of the lid. Next, miter one end of each 8" piece, then position both pieces along the lid ends to establish length. Mark and trim the back ends, then drill two  $\frac{1}{16}$ " pilot holes through each side molding where shown on the Exploded View drawing.

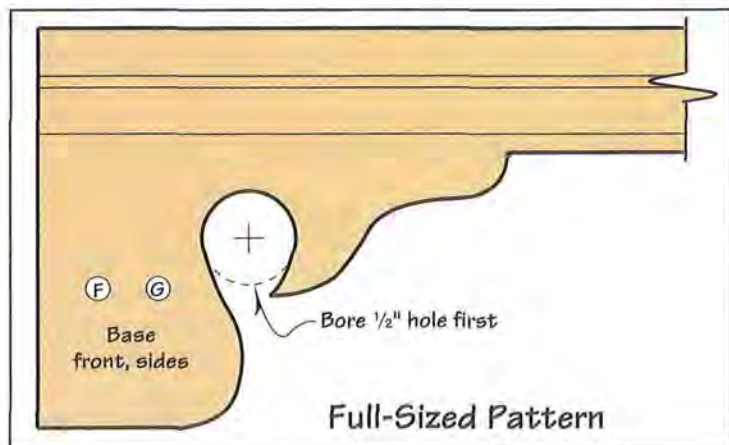
**Step 8.** Apply glue to the mitered front end and the first 1" of the adjacent edge of each side molding. Then, nail the moldings to the lid using  $\#16 \times \frac{3}{4}$ " brads, and clamp the miter joints. Note: The brads will allow the lid some seasonal movement. We used the glue to help keep the joints closed.

Later, set the brads, fill the holes, and then sand the fills flush after they've cured.

**Step 9.** Center the lid over the chest, and position the hinges along the top back edge of the chest. Scribe and chisel these mortises, then drill pilot holes. Now, screw the hinges to the box and check the action.

## Build the Tray, Then Add Finishing Touches

**Step 1.** From  $\frac{1}{4}$ "-thick stock, cut the tray sides (K) to size. To make the front and back (L), cut a 5"-wide piece of the same stock to the length listed in the Bill of Materials. Next, fit your





## MEET THE DESIGNER

The shingle in Hackensack, Minnesota, 200 miles north of the Twin Cities, reads *Bob Dillon Windsor Chairs*. Indeed, Bob is best known for his complete line of Windsors and other authentic Early American reproductions.

Bob's idea of a good day does not include shrieking electric tools and clouds of dust; he's in it for the hand-tool artisanry. In fact, Bob was originally drawn to his specialty because, as he maintains, "you can still build a better Windsor chair by hand than by using modern tools and streamlined techniques."

Bob's only formal wood-related training is a forestry degree from the University of Massachusetts. After college, he moved west and put in several years of "timber cruising" for the Forest Service, i.e., evaluating the resources on government-

owned lands before the timber rights are leased out. Bob never got tired of spending his days in the woods, but the predictability of a civil-service career made him antsy.

The first woodworking tools he picked up came as an inheritance from his grandfather—a few well-seasoned planes, chisels, and handsaws. "Now and then I noticed these old tools lying around," Bob recalls, "and started feeling some kind of obligation to learn how to use them." He developed enough skill to hire on with a small production shop, gradually setting up his own venture and acquiring some business sense along the way. Three years ago, he went completely on his own.

Bob now exhibits at a dozen crafts shows a year and has developed a national customer list. A member of the American Crafts Council and Minnesota Crafts Council, he was honored to receive a listing in *Early American Life* magazine's Directory of Fine Craftsmen for 1994.

table-mounted router with a V-groove bit set to cut a 1/4"-wide groove. (We ran test pieces to adjust to this width, which required elevating the bit to just shy of 1/8".) Set the fence, then rout a groove centered 2 3/8" from one end of the piece where dimensioned on the Tray drawing on page 5. Turn the stock end for end, and rout the other end groove. Now, reset the fence, and rout the center groove where dimensioned. Note: Save this router setup to make the dividers in Step 5.

**Step 2.** Trim the outfeed edge from your grooved workpiece to remove any tear-out. Next, rip the front and back parts to width. Then, cut tails in the sides and pins in the front and back using your jig and router, adjusting the depth of cut to allow for the 1/4"-thick stock; or, lay out and hand-cut the joints as dimensioned in *figure 2*. (Again, we scribed the shoulder layout lines with a marking gauge for appearance's sake.)

**Step 3.** Fit your tablesaw with a 1/8"-wide blade, and cut a 1/8"-deep groove 3/8" up from the bottom edge of the tray front, back, and sides. Next, rip and crosscut a tray bottom (M) from 1/4" stock, and cut a 3/16"-wide rabbet 1/8" deep along the bottom edges and ends. Dry-assemble the tray to check the fit of the bottom in its groove.

**Step 4.** Finish-sand the inside faces of the tray parts. Next, glue,

assemble, and clamp the tray, allowing the bottom to float in its groove without glue. After the glue has dried, cut four 1/8x1/8x1/4" plugs and glue them into the "mouseholes." Plane or scrape the joints flush.

**Step 5.** Measure the interior width of the tray (point of V-groove to point of V-groove) to determine divider (N) length. Rip a 6"-wide piece of 1/4"-thick stock to this length. Next, make a zero-clearance fence to use with the router setup you saved earlier. To do this, cut a straight, flat length of 5/4 scrap stock, and make a pass across the bit to cut the V-groove profile in one edge. Set the fence to "bury" exactly half the bit's diameter. Now, lay the workpiece flat, and rout a bevel on both faces at both ends.

**Step 6.** Joint the outfeed edge of the divider stock to remove any tear-out. Next, rip the dividers to width, and finish-sand them. Now, glue and clamp the dividers into the tray grooves. (We applied glue to the bottom edges, removing the squeeze-out.) After the glue has dried, finish-sand the tray exterior.

**Step 7.** Position and attach a right-hand brass lid support to the right end of the lid and the inside face of the right box side. Note: Be careful to position the pivot screw far enough from the back of the chest so that the support doesn't collide with the tray support on its downward travel.

**Step 8.** Remove the hardware, and finish-sand any surfaces that still need it. Next, apply your choice of finish to the chest, the lid, and the tray. (We brushed on a liberal coat of Minwax Antique Oil Finish, wiping off the excess after 10 minutes. We then rubbed on two additional coats using a clean cotton cloth. After the last coat had dried for 24 hours, we applied a coat of paste wax and buffed it to a low sheen.) Now, reattach the hinges and lid support. Note: To keep the support from rubbing off the finish, add a small washer to the pivot screw between the support and the chest side. 

*Project design: Bob Dillon*

*Photograph: Studio Alex*